

FLIGHT

The
AIRCRAFT
ENGINEER
&
AIRSHIPS

First Aero Weekly in the World

Founder and Editor: STANLEY SPOONER

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport
OFFICIAL ORGAN OF THE ROYAL AERO CLUB OF THE UNITED KINGDOM

No. 653 (No. 26, Vol. XIII.)

JUNE 30, 1921

[Weekly, Price 6d.
Post free, 7d.]

Flight

The Aircraft Engineer and Airships

Editorial Offices: 36, GREAT QUEEN STREET, KINGSWAY, W.C.2.

Telegrams: Truditur, Westcent, London. Telephone: Gerrard 1828

Annual Subscription Rates, Post Free:

United Kingdom .. 30s. 4d. Abroad .. 33s. 0d.*

These rates are subject to any alteration found necessary under abnormal conditions and to increases in postage rates

* European subscriptions must be remitted in British currency

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DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in the following list:

July 2 ...	Aerial Pageant (Hendon) for R.A.F. Memorial
July 6 ...	Entries close for Aerial Derby
July 16 ...	Inter-Varsity Air Race, Hendon
July 16 ...	Aerial Derby
July 29-31	Jacques Schneider Cup, Venice
Aug. 1-2	Cowes Seaplane Races
Aug. 27 ...	Entries Close for Coupe Deutsch
Sept. 4-11	Brescia Races
Sept. 10 ...	Pulitzer Trophy, Detroit, U.S.A.
Sept. 18 ...	Gordon Bennett Balloon Race
Sept. 25-	
Oct. 2	Aero Exhibition, Prague
Oct. 1 ...	Coupe Deutsch de la Meurthe
Nov. 12-27	Paris Aero Salon

EDITORIAL COMMENT



THE manner in which aviation was called upon to aid in giving to the public graphic and pictorial accounts of the historic opening by His Majesty of the Ulster Parliament must have seemed wonderful to the plain, everyday citizen. By the assistance of aircraft, films of the pageant of

Belfast were actually being shown in London picture-houses shortly after seven o'clock on the evening of the ceremony. The following morning's papers were fully illustrated with pictures taken in Belfast on the previous day, and we may remark, in passing, very fine pictures they were and possessed of historical interest beyond the ordinary. It is worth while noting the times, since they are eloquent indeed of the vast saving which is effected by the use of air transport. The films to which we have referred left Belfast by a D.H. 9 machine at 1.45 p.m., and arrived in London at the offices of the Pathé Co. at 5.50 p.m., a speed of something like 160 miles an hour having been maintained while in actual flight. They were rapidly developed, and were actually being shown on the screen in London in something less than six hours after the completion of the opening ceremony in Belfast, more than 400 miles distant across land and sea.

As we have said, this to the average person not conversant with the powers of aircraft may seem to be a very wonderful performance. So in fact it is, but, remarkable as it must be allowed to be, it is little more than commonplace when viewed from the standpoint of those who are better conversant with aerial development. It is only that the occasion was one of remarkable historic significance, accompanied by especial circumstances, which lifts it above the ordinary, everyday routine of flying services. As a matter of fact, every day now sees performances equally remarkable for speed and certainty of transport. In fact, if the details of every such flight were recorded the reader of newspapers would soon reach the stage of feeling that the similar details of every omnibus and railway journey might just as well be recorded.

There is a great deal of satisfaction to be derived

from this reflection, since it indicates more than anything else that aviation is in fact progressing, and progressing rapidly, in a quiet way. It may not be forging ahead quite as rapidly as we could hope, but it is making way, and that is more than a little to the good. We cannot have every day a spectacular event like the opening of the Ulster Parliament to bring home to the man in the street to what an extent he is already dependent upon the performance of aircraft for his news—and for much else of which he knows nothing—but the lesson is being rapidly inculcated.

French Interest in Aviation

Recently this country received a visit by eighteen members of the French Senate, who came over by air, not for pleasure alone, but mainly to manifest their interest in the development of aviation, and particularly in the French cross-Channel services. Their visit, the first to be made officially by a large party of Parliamentarians, is part of a widespread campaign for popularising air travel in France, and we doubt not will have had due effect in calling attention to the potentialities of commercial aviation. We could wish that the aerial group in our own Houses of Parliament were of like mind, and would practise what they preach by taking advantage of air travel facilities on every possible occasion and by letting it be known. We do not say this in any spirit of disparagement of the excellent work which is done by this group—we mean it more as a suggestion than in any other way. There is nothing more conducive to development than the known fact that those who advocate most the use of aircraft have the courage of their opinions and publicly manifest their faith in the new travel as these French senators have done. These latter have given a useful object-lesson which is worthy of imitation.

It is somewhat unfortunate that their return journey was marred by the failure of one of the two machines in use to complete the trip from London to Paris. Even from this fact it is possible for us to draw a little satisfaction—not that we have any desire to score off our very good friends across the Channel. It is a matter of record that on the cross-Channel services it is not the British machines which suffer from the minor defects which caused the Goliath to make a premature landing in the course of the return flight to Paris. From this we are entitled to draw the inference that, even if we are not developing commercial aviation as rapidly as other countries, we can still claim that the British machine is, as it was in the War, the soundest and most reliable of its kind.

The comparative frequency of these minor mishaps on this service leads to the reflection that it is just as well that our own conditions and regulations concerning airworthiness and inspection of machines prior to flight are somewhat rigidly drawn. They may be a little irksome on occasion, but better than risk of failure.

The Navy and the Air

The extent to which the air arm has entered into questions of naval strategy and tactics is to be fairly well judged from the recently issued White Paper dealing with the distribution of Naval staff duties at the Admiralty. This Paper is concerned only with the Operations side of Admiralty work, and makes none but casual reference to material or maintenance,

or to the work of the technical and administrative departments. From the document under discussion it is seen that the staff work is under the control of the First Sea Lord, who is also Chief of Naval Staff. He is assisted by a Deputy and an Assistant Chief of Naval Staff, who departmentalise the work between them. It is interesting to note that every division of the Staff concerned with active operations, whether anticipated or actually being carried on, is specifically called upon to deal with aircraft in one or other of their uses in connection with warlike operations by sea.

Naturally, aircraft having developed to the extent of which we know and having been so largely used in the War, this is only to be expected. It is nevertheless a little surprising to the layman to find that aircraft are regarded by the Operations side of the Admiralty from precisely the same matter-of-fact angle of view as any other types of vessels—we use the term because of its wide naval significance—belonging or auxiliary to the Fleet. Not that we regard the Admiralty as ultra-conservative in outlook. Quite the contrary, in fact, but we repeat that it is somewhat of a surprise as well as a satisfaction to find aircraft regarded, not as a mere adjunct to, but as an integral part of the naval armament of the country. Thus, we find that a part of the duty of the D.C.N.S. is to concern himself with "All operations and movements of H.M. ships and co-operating aircraft, including auxiliary craft." Then, the A.C.N.S. is responsible for the study of "Air developments in relation to naval warfare."

Working under the A.C.N.S. is an Air Section, which assists him with air questions relating to naval warfare and the co-ordination of all air matters dealt with by the Naval Staff. Also, its duty is to provide all information on air matters required by any branch of the Naval Staff. Manifestly, the Navy takes the Air very seriously indeed.

The R.A.F. Pageant

All roads should lead to Hendon on Saturday, for that is the day of the Royal Air Force Pageant, which is held in order to familiarise the public with the work of the Force in war and to raise funds for the R.A.F. Memorial Fund. This latter, it may be usefully remarked, is not a fund constituted for the purpose of erecting an ornate and not very useful memorial structure to those who passed in the War. Its purpose is far wider reaching than that, in that it is to provide for the support and education of the children of officers and men of the Force who have died, or who may die, on service leaving their dependents insufficiently provided for. Also, it is intended to lend a helping hand to dependents, other than children of members of the Force, who may find themselves in straitened circumstances through the loss of sons or brothers who may die in the service of the country. If there were no other appeal than that of the R.A.F. Memorial Fund, it would surely be sufficient, bearing in mind the magnificent service rendered by the aerial arm in the War, to fill the vast amphitheatre at Hendon on Saturday.

There is far more, however, to attract the sightseer. It is safe to say that never has there been so spectacular a show as will be given by the very pick of the Air Service. There is to be aerial fighting of the most realistic character, in which machines will be "shot down" in flames. Two great Handley Page bombers will be attacked by scout machines and



LONDON-PARIS FROM THE AIR, AS SEEN FROM A HANDLEY PAGE MACHINE: No. 3.—Buckingham Palace, with, in the foreground, the Queen Victoria Memorial.

"destroyed" as realistically as in war. A kite balloon will be attacked and shot down by an aeroplane, and the onlookers will be thrilled to the marrow by the sight of the observer leaving his burning balloon and descending by parachute. The *pièce de résistance* will be an attack on, and the complete destruction of, a model village by machines belonging to No. 24 Squadron. This model village is one of the most realistic affairs imaginable, built up from old aeroplane "scrap" and complete even to a church with quite an important-looking tower.

There is no need for us to go through the whole programme of events. We have said enough to indicate that the Pageant will be far in front of last year's, excellent as that was, and many as were the thrills it provided for the spectators. Last year, we understand, rather more than 70,000 people passed through the turnstiles. More facilities have been provided this time, and there is room in the aerodrome enclosure for quite 100,000. Nor need the intending visitor fear the difficulty of approach. Some congestion is probably inevitable, but in the light of last year's experience the police have been able to better their arrangements for controlling the traffic, and no trouble need be anticipated in reaching the ground. All that seems to be necessary for the complete success of the spectacle is fine weather, and, badly as the country needs rain, we trust the day will be as good as that on which last year's Pageant was held.

Air Mails in the House Recently, the Postmaster-General was asked in Parliament whether, in view of the increases in postal rates, he would consider sending correspondence to the Continent by air mail, in order to get an accelerated

service in return for the extra cost of postage. Mr. Kellaway replied that the increased rates were intended to make good the loss incurred on present services. Moreover, an accelerated service to the Continent could not be provided by air, so long as aeroplanes do not fly at night.

It seems to us that the most important part of the answer is in the closing sentence. Undoubtedly, the air services are severely handicapped by there being, at present, no night flying, and until full facilities are provided to enable aircraft to fly "all round the clock" it will not be easy to accelerate the Continental services by air. The reasons are two-fold. First, there is the lack of adequate lighting of routes, landing-grounds, and aerodromes. This disability is gradually being removed, but by no means as fully or as rapidly as we think the circumstances of the case justify. Agreed, that there is urgent need for economy, we still think that the work of mapping and lighting the airways should be pushed on with all practicable speed. Time is money, we are told, and, if the adage is a true one, it follows that the time saved by the more rapid transport of passengers and mails is money in the pocket of the nation.

In the second place, the question of night flying requires still more study on the part of those concerned in the development of aviation. While it is perfectly true that it is possible to fly with reasonable safety during the hours of dark, this is by no means enough. What is required is that we should be able to guarantee practically equal safety of flight during all periods of the day. When that can be done, commercial aviation will really have arrived.

THE LONDON-CONTINENTAL SERVICES

FLIGHTS BETWEEN JUNE 19 AND JUNE 25, INCLUSIVE

Route†	No. of flights*	No. of passengers	No. of flights carrying		No. of journeys completed†	Average flying time	Fastest time made by	Type and No. (in brackets) of Machines Flying
			Mails	Goods				
Croydon-Paris ...	43	244	9	19	38	2 44	D.H.18 G-EARO (2h. 5m.)..	B. (7), D.H.4 (1), D.H.9 (1), D.H.18 (1), G. (4), H.P. (3), Sa. (1), Sp. (6), V. (1).
Paris-Croydon ...	41	147	16	27	38	2 52	Breguet F-CMAQ (2h. 0m.)..	B. (7), D.H.18 (1), G. (5), H.P. (3), Sa. (1), Sp. (5), V. (1).
Croydon-Brussels ...	8	12	6	6	8	2 11	D.H.4 O-BARI (2h. 3m.) ..	D.H.4 (2), D.H.9 (2).
Brussels-Croydon ...	8	13	7	6	7	2 34	D.H.9 O-BATA (2h. 2m.) ...	D.H.4 (2), D.H.9 (2).
Croydon-Amsterdam ...	6	4	6	6	6	3 20	D.H.9 H-NABO (3h. 2m.) ..	D.H.9 (1), F. (4).
Amsterdam-Croydon ...	6	9	6	6	6	3 30	D.H.9 H-NABO (3h. 10m.)..	D.H.9 (1), F. (4).
Totals for week ...	112	429	50	70	103			

* Not including "private" flights.

† Including certain journeys when stops were made *en route*.

‡ Including certain diverted journeys.

Av. = Avro. B. = Breguet. Br. = Bristol. Bt. = B.A.T. D.H.4 = De Havilland 4, D.H.9 (etc.).
F. = Fokker. Fa. = Farman F.50. G. = Goliath Farman. H.P. = Handley Page. M. = Martinsyde. N. = Nieuport.
P. = Potez. Sa. = Salmson. Se. = S.E. 5. Sp. = Spad. V. = Vickers Vimy. W. = Westland.

Note.—Paris-bound Handley Page machines depart from Cricklewood.

Honours

AMONGST the honours conferred by the King upon the occasion of the opening of Parliament in Belfast on June 22 were:—

Viscounty, United Kingdom: The Rt. Hon. BARON PIRRIE, K.P., LL.D., D.L., Ormiston, Strandtown, Belfast, for valuable services to the Government in connection with ship

construction during the War and charitable services. Lord Pirrie is associated with Messrs. Harland and Wolff, who built Handley Pages during the War.

K.B.E.: Mr. SAMUEL C. DAVIDSON, Sea Court, Prince Town Road, Bangor, Co. Down, of Messrs. Davidson and Co., Ltd., Sorocco Works, Belfast, for scientific research, inventor of wind fans for H.M. Ships and fans for the ventilation of dope rooms.

THE R.A.F. AERIAL PAGEANT

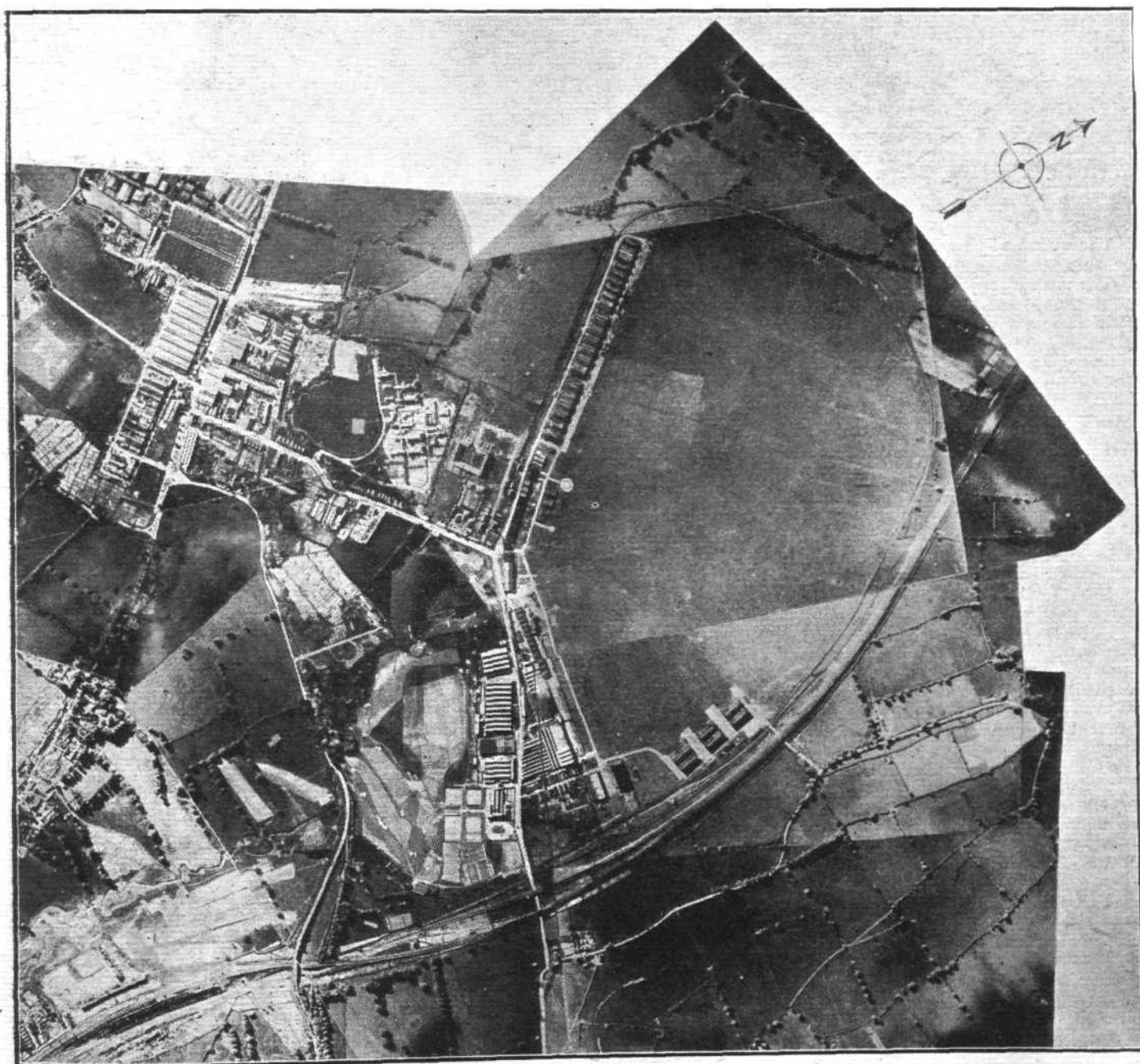
JUDGING from the latest details to hand, the programme of the second R.A.F. Aerial Pageant, which takes place at Hendon on Saturday, is crammed with remarkable and interesting items which will place last year's event—good as it was—right in the shade. First and foremost we are able to announce that their Majesties the King and Queen have consented to be present, and Wing-Commander H.R.H. The Duke of York, R.A.F., will be in the Royal Party. Invitations have also been extended to the Dominion Prime Ministers to be present.

The Pageant proper will commence at 3 p.m., but preliminary heats for various flying races between different types of machines and inter-squadron competitions will start at 12 o'clock. The gates will, therefore, be open from 11.30 a.m., and the public are strongly advised to arrive early. R.A.F. bands will play from 1 p.m. Two very interesting "side shows" have been arranged which will demonstrate the great part in aerial progress played by wireless telegraphy and photography. From a large tent, adjoining the 5s. and 10s. enclosures, communication by wireless telephone will be maintained to and from aircraft manœuvring overhead, commencing at 2 p.m., admission during each demonstration being

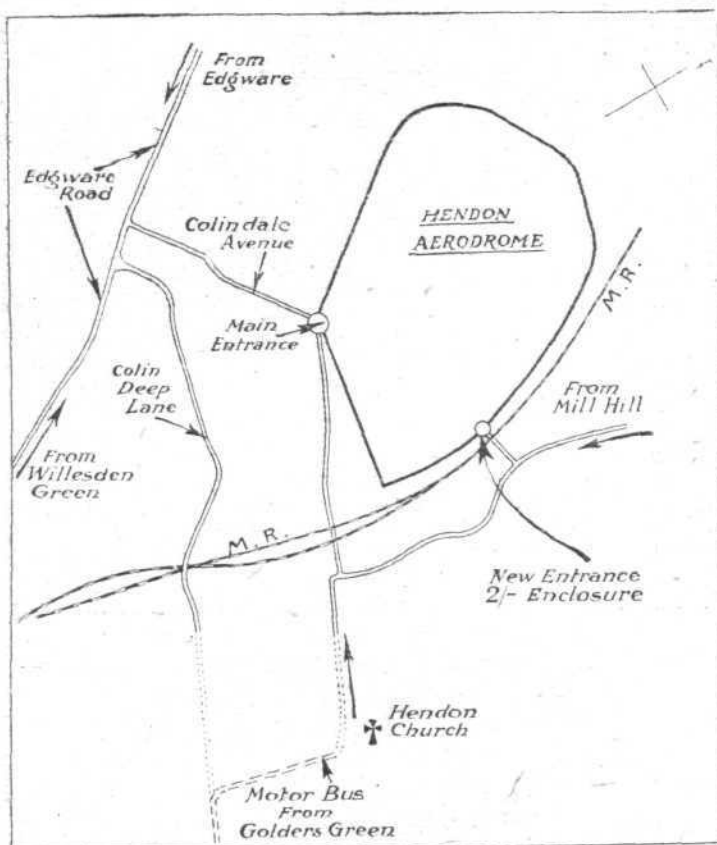
2s. 6d. During the proceedings photographs will be taken from above, and sold on the aerodrome! Other aerial photographs will be on sale at kiosks in the grounds.

The first item on the programme, a handicap race, should be decidedly interesting, as no fewer than nine distinct types of aeroplanes will take part—Handley Page, Avro, Vickers Vimy, Bristol Fighter, Sopwith Snipe, S.E. 5, D.H. 9a, Bat, and Nieuport Nighthawk. An aerial combat between a Siddeley-Nighthawk and a Westland-Wagtail should be extremely exciting. Another event providing excitement will be the attack on three Handley Pages flying in bombing formation by five single-seater machines (Snipes). The attack will be concentrated on one bombing machine which is forced to land under control, but on fire. The attack then rallies and concentrates on a second with similar results. We have been told by those who know that the effect of the machines descending "in flames" is most realistically carried out.

A graphic illustration of the progress of aeroplane design will be afforded by the appearance together in the air of the F.E. 2, a common type at the commencement of the War, and the S.E. 5, a type largely used towards the close of the War.



THE R.A.F. PAGEANT AT HENDON AERODROME: A "Mosaic" prepared by the Air Ministry of the Aerodrome and its approaches. This specimen of what aerial photography accomplishes, taken in conjunction with our key-map and the traffic control scheme map, will enable either pedestrians or others to be independent of guides in getting to the points which they seek.



Sketch key-map to the R.A.F. "Mosaic" of Hendon Aerodrome and its approaches.

The event of the day, however, will undoubtedly be the bombing and machine gun attack on a "model" village.

The village represents the headquarters in which an enemy staff are billeted. In the scheme laid down a formation of British bombing aeroplanes is observed approaching, and the alarm is sounded in the village by Klaxon horn. The panic-stricken inhabitants take flight *en masse* in a state of great confusion. They are just clear of the village when the formation descends and launches an overwhelming charge of explosives. The village is practically demolished by the first attack.

A second flight of aeroplanes, flying almost immediately behind the first bombers, discharges a second load of bombs, and the village simultaneously bursts into flames. General Blitzenscooter, the hostile Army Commander, in attempting to escape from the scene of the disaster by aeroplane, is struck by a bomb, and blown to fragments in the act of taking off in his machine. The use of five-second delay fuses makes it possible for the bombers to get clear of the village before their heavy calibre bombs explode.

The smaller incendiary and man-killing bombs explode on contact.

Other events will comprise:—A fight between a Bristol Fighter on one side and two Snipes on the other; a standard race for Avros (one competitor from each of the 14 R.A.F. Stations); an exhibition of looping, rolling and spinning by Flight-Lieut. Bullman; formation flying by five Snipes of the Central Flying School; formation flying with nine Bristol Fighters by No. 24 Squadron (these two events were very pretty and popular last year); exhibition of upside down flying, slow rolling and rolling off loops by Flight-Lieut. Longton; a relay race between teams from each of the 14 R.A.F. Stations, consisting of a Snipe, Bristol Fighter and an Avro; exhibition of flying on an Avro by Flight-Lieut. Noakes; attack and destruction of kite balloon; formation of artificial cloud screen and formation of a ground smoke screen; etc., etc.

Seats in some of the machines taking part in certain of these events may by application be secured by the public at a cost of £3 3s. and £5 5s., whilst passenger flights can also be had on civilian machines at £2 2s.

Among the pilots who are down to take part are: Squad-Leaders C. Draper, D.S.C.; W. S. Douglas, M.C., D.S.C.; Flight-Lieuts. D. F. Stevenson, D.S.O., M.C.; A. H. Peck, D.S.O., M.C.; N. Keeble, D.S.O., A.F.C.; A. C. Coningham, D.S.O., M.C., D.F.C.; C. McM. Laing, M.C., A.F.C.; W. H. Longton, D.F.C., A.F.C.; J. Noakes, A.F.C., M.M.; A. R. Arnold, D.S.C., A.F.C.; G. H. Hooper, M.C., D.F.C.; D.

Gilley, D.F.C.; R. H. C. Usher, M.C., A.F.C.; H. S. Kerby, D.S.C., A.F.C.; C. E. H. Medhurst, O.B.E., M.C.; Flying Officers G. Bulman, M.C., A.F.C.; P. S. W. Bulman, M.C., A.F.C.; C. F. Maitland, D.F.C.; R. C. B. Brading, D.F.C.; W. E. G. Mann, D.F.C.; F. D. Travers, D.F.C.; H. L. Rough, D.F.C.

A special traffic scheme has been prepared to cope with approximately 100,000 people, and the enclosures at Hendon, having been doubled in size specially for the occasion, will comfortably accommodate the largest crowds. The tube service to Golder's Green is being increased, and special omnibus services from Golder's Green to the aerodrome will run in connection with the tube. Metropolitan trains will also be run every few minutes to Willesden Green, the tram service thence to Hendon being largely augmented. Road traffic problems have been carefully organised by the Police in the light of recent experience in traffic control from the air, and motor-cars from London are recommended to proceed *via* Golder's Green. It is probable that "R. 33" will be used for traffic control. Special sites for motor coaches have been provided, and will be allocated in advance upon application. Note that a new 2s. public enclosure has been arranged for on the Golder's Green side of the aerodrome.

Mr. Clerk of the Weather, we want rain very badly—but not on Saturday, please!

R.A.F. Pageant Traffic Arrangements

SPECIAL arrangements for dealing with traffic proceeding to the Royal Air Force Aerial Pageant on July 2 have been approved by the Commissioner of Police of the Metropolis. A traffic plan, drawn up in accordance with these arrangements and issued by the Automobile Association, is given on this page.

Every possible arrangement has been made to enable traffic to reach the aerodrome with a minimum of delay and inconvenience, and, to assist in this, motorists are asked to arrive as early as possible. It is recommended that cars be placed in the motor enclosures provided at a nominal cost of 5s. per car.

Detailed arrangements have been made for dealing with the traffic in Colindale Avenue, which are not shown on the plan, but will be perfectly clear to everyone on arrival.

The Aerial Pageant commences at 3 p.m., but preliminary flying will be carried on from 11.30 a.m.



Traffic arrangement plan as approved by the Commissioner of Police and drawn up by the Automobile Association.

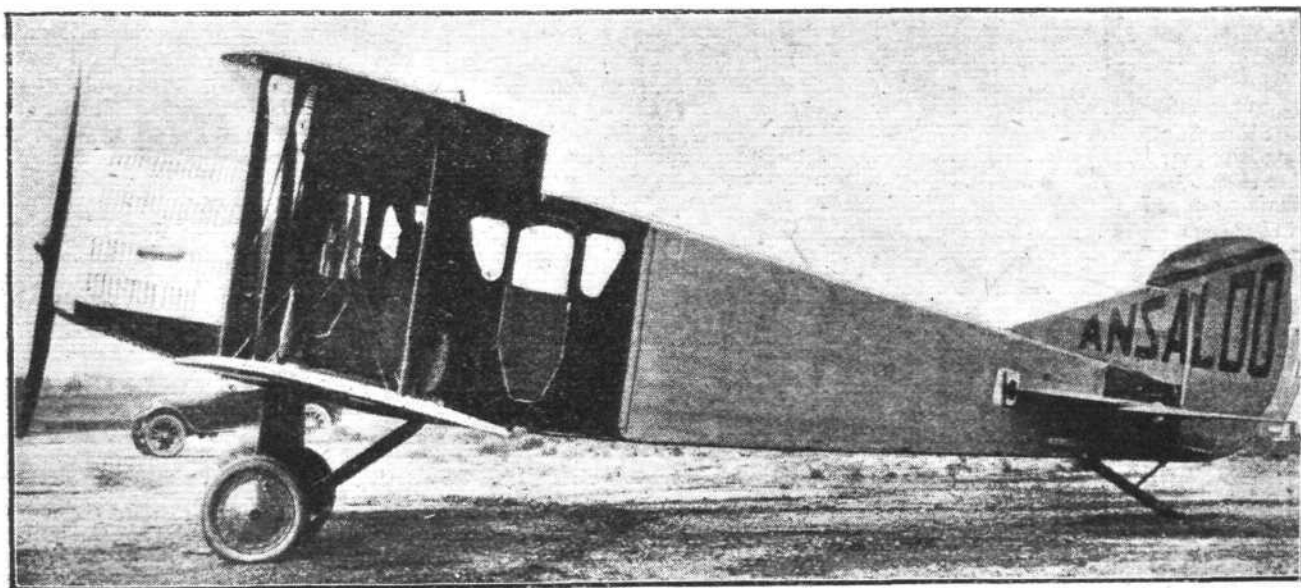
THE ANSALDO A-300 C COMMERCIAL BIPLANE

We give herewith some brief particulars, together with general arrangement drawings and illustrations, of a commercial "limousine" biplane recently produced by the well-known Italian firm S. I. A. Gio. Ansaldo and Co. of Rome. One of

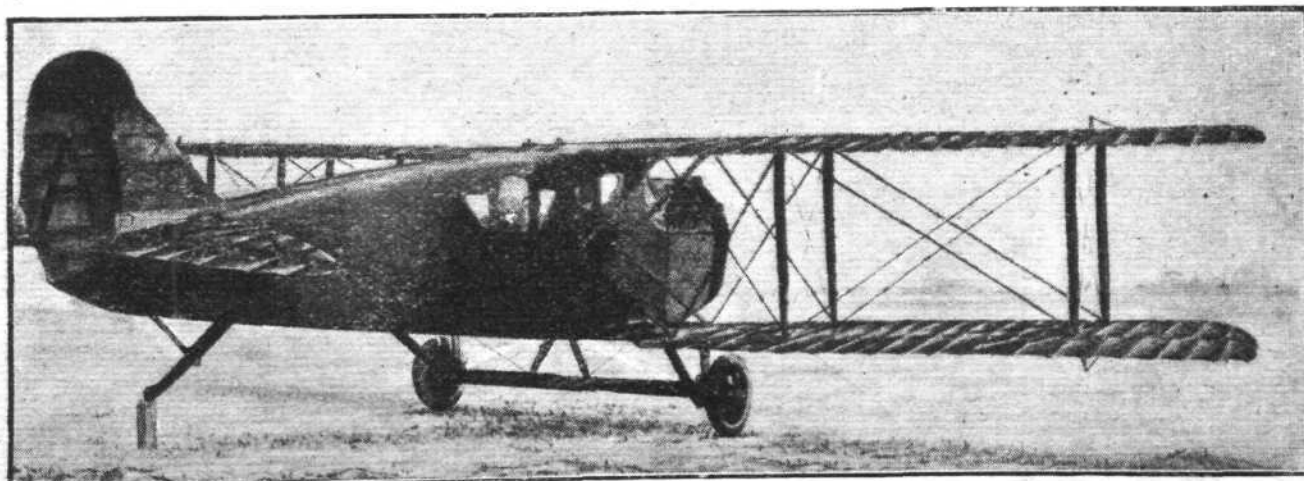
these machines was taken over and flown in America, and last May flew from Mineola, Long Island (N.Y.), to Chicago—a distance of over 700 miles—in 7½ hours' flying time, with three passengers and 500 lbs. of express matter.



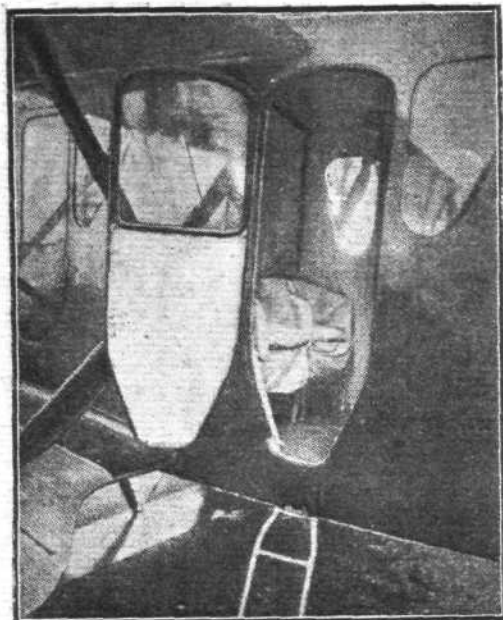
THE ANSALDO A-300 C COMMERCIAL BIPLANE: Three-quarter front view.



THE ANSALDO A-300 C COMMERCIAL BIPLANE: Side view.



THE ANSALDO A-300 C COMMERCIAL BIPLANE: Three-quarter rear view.



THE ANSALDO A-300 C COMMERCIAL BIPLANE:
View of the passengers' cabin.

The main characteristics of the Ansaldo A-300 C are:—

Span	44 ft. 9½ ins.
Chord	6 ft. 6 ins.
Gap	5 ft. 6 ins.
Overall length	31 ft. 8 ins.
Overall height	10 ft. 9½ ins.
Area of main planes	473.4 sq. ft.
Weight (total)	4,187 lbs.
Weight (empty)	2,534 lbs.
Useful load	1,653 lbs.
Loading /h.p.	14 lbs.
Loading /sq. ft.	8.85 lbs.
Speed range	43-120 m.p.h.
Cruising speed	100 m.p.h.
Endurance	5 hrs.
Ceiling (full load)	16,000 ft.
Climb (15 mts.)	7,000 ft.

The Ansaldo A-300 C was designed by the firm's engineer, Sig. Brezzi, specially for the transport of passengers, etc., and is essentially different in design from the war machines produced by this firm. Considering the useful load carried

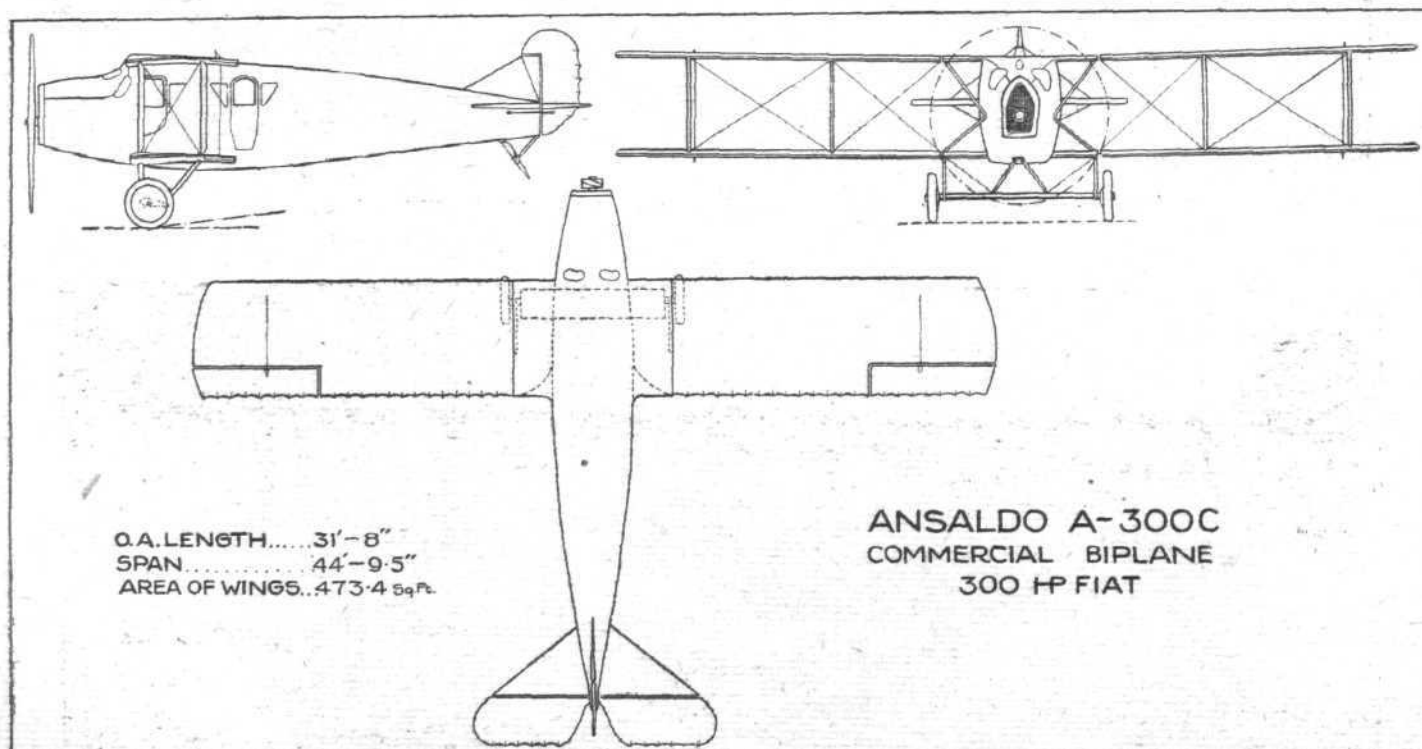
(1,600-1,700 lbs.), the power employed (300 h.p.) is by no means excessive, and its aerodynamic properties and general characteristics are such that it has a good all-round performance, especially for commercial transport work, without any sacrifice of safety or comfort of passengers. It is stated that this machine is exceptionally nice to fly.

Two alternative methods of construction are employed for the fuselage—one with tubular steel framework, the other, wood. In the metal type the front portion of the fuselage, from nose to leading edge of the main planes, containing the engine—a 300 h.p. Fiat A-12-bis—is made detachable, which greatly facilitates the changing of engines and transport. In other respects both types have the same general characteristics. The fuselage is of deep rectangular section, extending from top to bottom planes, and tapering sharply to a vertical knife-edge at the rear. Aft of the engine compartment is the pilot's and mechanic's cabin, which is totally enclosed and is provided with front and side windows, and a door at the side. At the rear of this cabin is another for the passengers, extending beyond the trailing edge of the main planes. The passengers' cabin is large and comfortable—measuring, roughly, 5 ft. long, 6 ft. high, by 4 ft. wide—and accommodates four passengers, who are seated in wicker armchairs. Access to the cabin is by way of a large door in the side of the fuselage, and a good view is obtained from three windows on each side. The rear part of the fuselage, aft of the cabin, is detachable, and is covered with fabric; the cabin portion is covered with ply-wood, and the engine section with sheet aluminium. The radiator is mounted in the nose of the fuselage, and is provided with a means for varying the exposed area of cooling surface.

The main planes are without stagger or sweepback, and upper and lower surfaces are of equal span and chord, and are identical, thus facilitating replacement. They are in four sections, attached to small wing roots growing out of the fuselage, which are braced to the latter by faired tubular steel struts. There are two pairs of interplane struts each side, consisting of round steel tubes faired to a streamline section, and external bracing is by streamline-wire. Unbalanced ailerons are fitted to all four wings. The tail consists of a triangular horizontal stabilising surface, divided unbalanced elevators, a vertical fin and a balanced rudder. The angle of incidence of the tail plane can be varied, during flight, from the pilot's cockpit.

The landing chassis is exceptionally wide—nearly 10 ft.—and consists of two V's (metal) attached to the lower centre section connected by a wing-form axle, braced to the fuselage at the centre by inverted V struts.

The factor of safety of the wings is 8½, and over 9 for the fuselage. Petrol is delivered from the main tank to a service tank in the roof of the pilot's cabin, thence to the engine.



O.A. LENGTH.....31'-8"
SPAN.....44'-9.5"
AREA OF WINGS...473.4 Sq.Ft.

ANSALDO A-300C
COMMERCIAL BIPLANE
300 HP FIAT

THE ANSALDO A-300 C COMMERCIAL BIPLANE: General arrangement drawings.

AEROPLANES AND THE KING'S VISIT TO BELFAST

YET once again the aeroplane has given popular demonstration of its capabilities of playing an extremely important part in modern commerce—a part likely to modify existing methods to a surprising degree, especially so far as Father Time is concerned. On the occasion of the visit of Their Majesties the King and Queen to Belfast, to open the Northern Parliament, aeroplanes were employed, with most satisfactory results, by the Press and a cinematograph firm, for the purpose of conveying, in the shortest possible time, photographs and other important matter, between London and Belfast and back. By the employment of aeroplanes, photographs of the opening of the Northern Parliament enabled reproductions of the photographs showing the principal events of the ceremony to be published in Thursday morning's newspapers, in London, the Midlands, Scotland, and Ireland. But what is more remarkable still is, perhaps, the fact that Messrs. Pathé were able to show the film of the scenes at Belfast in several London cinemas during the same evening (Wednesday) of the happenings.

Apart from the utility aspect, these flights were not without incident, and we give below the "story" of the aeroplane's latest triumph.

The machines used for these operations were as follows:—A D.H.9 (240 Siddeley Puma) piloted by Mr. Alan Cobham, chartered by *The Times*; a similar machine piloted by Mr. Hatchet for Pathé Frères (also pictures for *Daily Graphic*), both supplied by the Air Express Co.; a D.H.4, belonging to the Instone Air Line, piloted by Capt. F. L. Barnard for the *Daily Mail* and *Daily Mirror*; and an Avro (100 h.p. Renault), of Aero Films, Ltd., piloted by Mr. E. D. Herne for the *Daily Sketch*.

The machine chartered by *The Times* did useful work on the journey to Belfast, as well as on the return from Belfast to London, for on the morning of the outward trip on Wednesday some 500 lbs. weight of that day's issue of *The Times* was carried on board, so that copies were able to be distributed in Belfast by breakfast-time. The machine left Stag Lane Aerodrome at 3 a.m., under by no means ideal conditions, there being a gusty head wind, with low clouds and patches of ground mist. However, good progress was made up to Manchester, where a short stop was made for petrol. Continuing, they passed over Barrow, between the mouth of Solway Firth and the Isle of Man, and then, picking up the Irish coast, made straight for Belfast, landing in a field just outside at 9.40 a.m. After the papers had been transferred to waiting cars, Mr. Cobham flew his 'bus across to Aldersgrove Aerodrome, some 12 miles away, where the machine was thoroughly overhauled, and tuned up, etc. At 1 o'clock, he flew the machine back again to the field where he had previously landed, and here a member of *The Times* was taken aboard, together with a cargo of photographic plates exposed during the opening of Parliament procession, and a start was made for the home journey. Flying close behind was a second D.H.9.—the one piloted by Mr. Hatchet, with the Pathé films on board. The two kept company, passing over Barrow, Preston, Wigan,

Warrington, Birmingham, until, when near Rugby, Hatchet's machine ran out of petrol, and he had to land in a ploughed field. On missing his aerial companion, Cobham returned and landed alongside in the same field. The Pathé films having been transferred to the other D.H., she was then pushed into an adjoining field, which was *slightly* better for getting off from than ploughed land. This field contained corn! However, with much manœuvring, and one wing overlapping the standing corn, a safe get-away was effected. Picking up the railway, this was followed up to Watford, and then a direct line was made for Cricklewood Aerodrome, where a landing was effected at 5.30 p.m. The plates, films, etc., were taken over by cars, to be delivered to their final destination, whilst the D.H.9 flew across to Stag Lane. The other D.H.9, after obtaining from Rugby a fresh supply of petrol, returned home shortly after.

Capt. Barnard, the *Daily Mail* courier, was flying D.H.4, G-EAMU, "City of York," which did duty on the London-Continental for Instone's during last year, and tells his story thus:—

"The conditions for flying were not very grand. The wind was a bit tricky, but we got off without difficulty, and the old 'bus was never once in trouble from the moment we started. Visibility was good, and we had splendid views as we passed over the sea of the Isle of Man, Blackpool, and Liverpool, flying at an average height of 1,500 ft. At Manchester, it took us 21 minutes to hand over the pictures, fill up with petrol and oil, and get on again. At times we were probably flying at a speed approaching 200 m.p.h." Near Dunstable two other machines (the two D.H.9's?) were passed. Capt. Barnard left Aldersgrove at 1.32, arrived at Manchester at 3.6, restarted from here at 3.27 and arrived at Croydon at 4.58.

The *Daily Sketch* aerial messenger had a more or less exciting time. Capt. E. D. C. Herne, accompanied by Mr. A. O. Russell, of Aero Films, Ltd., left Hendon on Tuesday morning with the intention of flying to Dublin, but Chester was the limit of the first stage.

There the Army authorities refused to allow him to leave owing to the strong wind and unfavourable conditions generally.

"In the evening," continued Capt. Herne, "we decided to try for Belfast by way of Scotland. At Barrow-in-Furness, we ran into a violent storm, and a mist so thick that we could not see the front of the machine.

"Wet through and ravenous, we came down in a small field near Dalton, where we had a wonderful meal of three fried eggs and about a pound of bacon for 1s. 6d. each.

Later we flew non-stop to Luce Bay, and, after breakfast, set out for Belfast, where we landed at 11 in the morning.

At 1.30 we left with the pictures, and crossed the Irish Sea to Chester in two hours. We took up petrol, and set out for Hendon. Within ten miles of the aerodrome, an air lock in the petrol system necessitated a forced landing. Eventually we reached Hendon at 6.45 in the evening."

FIRST FLIGHT TRIAL OF "Z.R.2" ("R. 38")

THE "Z.R.2" ("R. 38"), the largest airship in the world, took the air for the first time on the night of June 23.

Built at the Royal Airship Works, Cardington, Bedford, and sold to the American Navy, she has, during the past fortnight, satisfactorily undergone her airborne and engine trials in the construction shed.

The trial was her first flight test, and was entirely satisfactory.

She left Cardington station at 9.55 p.m., and landed, after a 6½ hours' flight over the Home Counties, at 4.20 a.m.

The airship was commanded by Flight-Lieut. A. H. Wann, R.A.F., while others on board during the cruise were Air-Commodore H. R. M. Brooke-Popham, C.B., C.M.G., D.S.O., A.F.C.; Air-Commodore E. M. Maitland, C.M.G., D.S.O., A.F.C.; Mr. C. I. R. Campbell, R.C.N.C., Superintendent of the Royal Airship Works; Flight-Lieut. J. E. M. Pritchard, O.B.E., A.F.C.; Flight-Lieut. I. C. Little, A.F.C. (First Officer); Flight-Lieut. R. S. Montague, D.F.C. (Navigator); Flying Officer C. F. Matthewson, A.F.C. (Engineer Officer);

and two American Officers—Commander L. H. Maxfield, U.S.N., who will be the American Captain of the airship, when she is taken over, and Lieut.-Commander Beig, U.S.N., Engineer Officer.

Altogether, forty-eight persons, including the crew, were carried.

After further trials at Cardington and Howden, to test thoroughly the reliability and general airworthiness of the airship, she will be handed over to the American crew, who will carry out such flights as they consider necessary, to accustom themselves to the handling of the 'ship, before her departure on the trans-Atlantic flight to the base which has been constructed recently at Lakehurst, New Jersey.

Brief particulars of the "R. 38" appeared in *FLIGHT* for June 9 last, but we give again, below, the main dimensions:

Length, 695 ft; diameter, 85 ft. 4 ins.; capacity, 2,700,000; total lift under normal conditions, 83 tons; total h.p., 2,100; engines, 6 Sunbeam "Cossack" of 350 h.p.; normal crew (officers and men), 28-30.

Aerial Races in California

THE Aero Club of Southern California have organised a two-day aviation meeting, which will be held at Los Angeles Speedway on July 16 and 17. Several interesting events have been fixed, including the following:—

An endurance race, a transport race, the Commercial Derby or "Jennie Scramble"—open to all Curtiss JN-4's, standard J1's and "Canucks"—a sport-plane handicap, Curtiss Cup race, altitude contest, and a fast-and-slow" contest.

LONDON TERMINAL AERODROME

Monday Evening, June 27

THE French Grand Prix on Sunday caused a rush of passenger traffic through Croydon during the week-end. Bookings for Saturday became so heavy during the week that the air transport companies concentrated machines at Croydon on Friday.

No fewer than 40 aeroplanes were housed in the sheds and hangers on Friday night, and the extra hangers erected during the threat of the Triple Alliance strike became extremely useful. With three Goliaths, three Handley Page 'O-400's, a Vickers "Vimy," and two D.H. 18's, in addition to all the small fry, there was an overflow even after the permanent sheds had been packed full.

Though Friday's traffic was heavy, the real exodus from Croydon was on Saturday, when close on 100 passengers left for Paris. Owing to the continued heat the atmosphere was very thin, and some of the heavily-laden machines had difficulty in getting off, while their climb was painfully slow.

The aerodrome Meteorological Office are at last moving into their new hut, and were busy today transferring their instruments. Many of these have not been in working order owing to the cramped nature of their old quarters, but in the new station, replete with every convenience, many new and interesting instruments are to be installed.

Mr. Hey, the meteorologist-in-charge, was unable to super-

vise the change, having much more important business on hand. He was married at Aberdeen on the 22nd, and is using up a tremendous amount of back leave on an extended honeymoon. His deputy, Mr. Matthews, speaking jokingly, says he believes the whole affair to have been arranged with the object of saddling him with the task of removal and of the equipment of the new hut.

Films and Photographs by Air

MR. BARNARD, on the Instone D.H. 4a, made a rapid trip from Belfast to London on Wednesday with newspaper pictures of the opening by the King of the Ulster Parliament.

Mr. Hearn, who possesses his own Avro, also brought pictures and cinematograph films from Belfast on the same day. He flew over to Croydon from Hendon today, and seemed quite proud of the performance of his old 'bus.

Though the work on the airship mast is not now so spectacular, an enormous amount of detail construction has been done this week. The power-house at the foot of the mast has developed from being merely a concrete base into a mass of dynamos, motors, pumps, and switch-gear. A hut has been built round all this electrical plant, the steam "Rocket," or "Puffing Billy," occupying a concrete base of its own outside the power-house.

The pipes for the water-ballast are now in position up the mast, and electricians are swarming over the outside, fixing obstruction and other lights all the way from the base to the top.

The iron frame work for the revolving-head, which arrived in sections, has been riveted together, and is now waiting to be hauled up the mast.

News from Amsterdam

THE general manager of the K.L.M., Mr. Plessman, arrived from Amsterdam by air on Wednesday. After spending the rest of the week in London, where he conferred with many British air experts, he returned to Amsterdam by boat on Saturday night.

He tells me that Amsterdam is becoming quite a busy airport. During the last fortnight, for which figures are available, 270 passengers passed in and out of the Schiphol aerodrome. There are now services of monoplanes running from Amsterdam to London and Hamburg, while to Brussels and Paris there is a double service, one being run with "Goliaths," and the other with the Spads and Breguets of the Messageries Aérienne.

Since the restarting of the Handley Page services between London and Paris on March 19 last, their machines have completed 100 trips and carried 812 passengers. Mr. Cogni tells me he is extremely disappointed at the delay in getting the W. 8 on the service. It appears that the Handley Page Company have been unable to get Napier engines owing to the fact that the military branch of the Air Ministry has practically cornered the output. Though Mr. Cogni has made every endeavour for three months past, to get two "Lions" released in order to put the W.8 into commission, these engines have only just been delivered.

The Shell-Mex bulk storage petrol plant is now nearing completion. To the uninitiated it looks a bewildering mass of tanks, pipes, and pumps, but I understand that it will get over the difficulty, experienced with the Anglo-American plant, of the extreme "stiffness" of the pump owing to the long delivery pipe. The new plant is expected to deliver a gallon of petrol into the tanks of an aeroplane with one turn of a rotary pump which "a child could work."

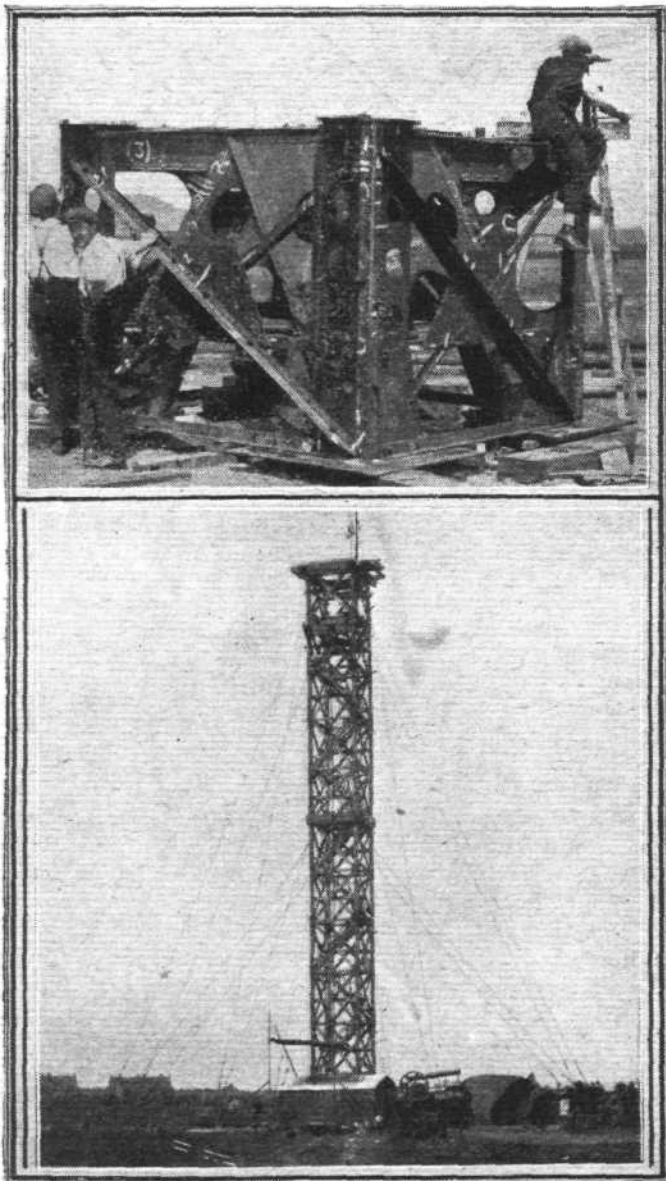
Visitors from France

A PARTY of French Senators arrived by air on Friday. Half of them travelled in a Breguet and the others by Goliath. Quite a distinguished group was waiting on the aerodrome to receive them, including Capt. Guest, Air Minister, and Mr. Joynson-Hicks, M.P.

I am told that the main object of their visit was to confer with the Admiralty and Air Ministry about the erection of airship masts in France.

As they arrived about 1 p.m., they lunched at the Trust House before making a tour of the aerodrome and proceeding to London. They left Croydon on Saturday afternoon in a Goliath, which had, unfortunately, to force-land at Amiens. Some of the Senators completed their journey by train.

In order to cope with the influx of travellers for the Grand Prix, and also with the visit of the Senators just mentioned—why will these people always pick out busy days?—the Grands Express had three Goliaths leaving Croydon on Saturday and one arriving. They have had quite a busy week, carrying no fewer than 134 passengers between London and Paris.



The Airship Mooring Mast at Croydon Aerodrome, in the making: The top of the mast being riveted, as seen above—the main structure below. (N.B.—The photograph of the top section is not to the same relative "scale" as the mast photo.) This metal top will be "placed" in two halves, from corner to corner; the rest of the mast is constructed of wood with metal angle plates, and the interior stairway is zig-zag with platforms, instead of the straight-up ladder, as in the Pulham mast.

The Air Ministry have, already, placed a first order for machines which will be required under the new subsidy scheme, the De Havilland Aircraft Company having been instructed to proceed at once with the building of two new D.H. 18's. This Company, by the way, is developing rapidly, and, besides its design and aeroplane-building business, has departments now for "air taxi" work and aerial photography. They provide, in addition, a garage for aeroplanes, and carry out repairs on any type of machine.

Sports' Club Cricket

THE Sports' Club played their first cricket match on Saturday, their opponents being Warlingham. The wicket was essentially in favour of the bowlers, and some remarkable bowling ensued.

The aerodrome team batted first, and were dismissed for 20 runs. Warlingham then opened in fine style, and looked like piling up a big score; but in his second over Mr. Saul took four of their wickets, the ball bouncing about amongst the bumps on the ground and completely demoralising the Warlingham batsmen—who, nevertheless, managed to win by ten runs.

The bowlers are chuckling over the defeat of the batsmen, who are waiting now for the matting wicket to be laid, when they are determined to have their revenge.

"Specials" to Paris

THE Instone Air Line ran two "specials" to Paris on Sunday. The Vickers "Vimy," carrying eleven passengers, left soon after 9 a.m., returning from Paris late again in the after-

noon. She encountered thick fog in the Channel, and, abandoning the attempt to reach Croydon that night, landed near Boulogne. Leaving Boulogne at 6 a.m. today she arrived at Croydon at 7 a.m.

Mr. Barnard, on the Instone D.H. 4a, also left for Paris on Sunday morning, and returned in the evening with photographs of the Grand Prix for the newspapers.

The Gas Accumulator Company are busy completing their cone-light, experiments having proved it a success.

They have enclosed the top of the light in a waterproof glass cover, and are installing automatic flashing gear.

Major-Gen. Brancker visited the aerodrome on Saturday, and Generals Sykes and Festing were there to welcome the French Senators on Friday.

Handley Page Transport sent a special D.H. 4a to Liverpool on Friday with a business man who had an urgent call to that city and had to be back in London for an appointment the same evening. A two-seater Spad belonging to the Messageries Aérienne forced-landed in a railway cutting near Canterbury on Thursday. Both passengers were uninjured, but the machine was a "write off." The C.A.T.O. now issues warnings to the air traffic companies when it is anticipated that "atmospherics" will interfere with wireless messages.—Capt. Muir tells me that while flying to Brussels he noticed that the vegetation growing on places where shell-holes have been filled in is much more vigorous than elsewhere, and that it is quite easy, in consequence, to distinguish from the air where these shell-holes have been.



Dominion Premiers to Visit Croydon

THE Dominion Premiers will, on Saturday morning next, pay a visit to Croydon aerodrome. They will make a thorough inspection of the various "departments," and see the actual working of the London-Continental services. "R. 33" will also be visiting the aerodrome, and, if the mooring mast is ready by then, will test its qualities, afterwards proceeding to help control traffic going to the Pageant at Hendon.

The National Physical Laboratory Annual "At Home"

TUESDAY was annual visitation day at the National Physical Laboratory, Teddington, and the fine weather helped to bring together a distinguished company, who followed with the keenest interest the various experiments in the different departments. In the duplex wind tunnel which has been completed during the current year a new method of determining rotary derivatives was shown, whilst in the other tunnels various methods of investigation which are employed in connection with airscrews, airships and problems of stability and control were demonstrated. One of the most interesting features of the Laboratory is the William Froude National Tank.

At 2.30 an interesting presentation was made to the Laboratory of a bas-relief of the late director, Sir Richard Glazebrook. The bas-relief is the gift of past and present members of the general board and executive committee of the laboratory and other friends, and is the work of Mr. J. Cluysenaar, of Brussels. The presentation was made in the Administration Building by Sir Joseph J. Thomson, and the gift was received on behalf of the laboratory by Professor C. S. Sherrington, president of the Royal Society and chairman of the general board of the laboratory.

Paris Aero Salon

FURTHER particulars of the French Aero Salon, November 12-27, are now available. Broadly the general regulations are the same as in 1919, but the charge for space has been considerably reduced, and at the present exchange value may tempt some of our firms to be represented. Central positions of 140 sq. metres are this year 12,000 frcs., second positions 9,000 frcs., and third positions 4,000 frcs., instead of 16,000, 12,000 and 5,000 frcs. respectively. Exhibitors this year must not stage or advertise other firms' productions, but air navigation companies may be represented in the construction of their machines. Prices of admission at 5 frcs. on the opening day and every Friday, and 2 frcs. on every other day remain as before, but any profits in the Show will be divided as to half for aeronautic works and half to the exhibitors.

The classification embraces: (1) Balloons, (2) heavier-than-air machines, (3) motors and propellers, (4) aerial navigation, (5) motor boats, (6) machine tools and raw materials, (7) transport and sheds, (8) allied industries, (9) commerce, (10) science and art, and (11) maps and books.

M. Leblanc is the President, M. Granet, Secretary-

General, and the Executive Committee comprises MM. Bréguet, Chauviere, Delage, Kapferer, Lioré, Lugnet de Saint-Germain and Mallet. Space can be now applied for and other particulars obtained from the Commissariat-General, 9, Rue Anatole-de-la-Forge, Paris. Applications close September 1.

Aircraft Material to be Surrendered by Germany

ON June 18 the Ambassadors' Conference, it is announced, decided that Germany must as soon as possible deliver up to the Allied Air Control Commission all aeroplane material manufactured contrary to the Boulogne decisions.

Everything described by the Commission as military material will be handed over to the Entente. Of the civil material only 25 per cent. will be thus handed over. The remainder will go back to Germany as soon as the German Government is authorised to resume the building of aircraft.

French Customs Aerodromes

THE Director-General of Customs announces that Customs clearance of seaplanes imported from abroad by the Mediterranean may be carried out at the Antibes station (S.N. Ae.). Seaplanes alighting from abroad may carry out Customs formalities at the Antibes station and the following Mediterranean ports:—Mentone, Monaco, Villefranche-sur-Mer, Nice, Cannes, Saint-Raphael, Saint-Tropez, Marseilles, Saint Louis-du-Rhone, Cette, Port-Vendres.

French Aeronautical Gazetteer

THE Governments of France, Belgium and Great Britain having agreed to compile Aerial Gazetteers of the aerodromes, seaplane bases and facilities for air navigation existing in their respective countries, the French Civil Aviation authorities have commenced the issue of Gazetteer sheets in the "Bulletin de la Navigation Aérienne." Sheets with regard to Valenciennes (Secondary Air Station) and Bayonne (Customs Seaplane Station) were issued in the "Bulletin" of April.

A Bristol "Fighter," not "Tourer"

IN reference to an advert. announcement in last week's FLIGHT, Mr. Lawton, of the Aircraft Disposal Co., Ltd., writes us as follows:—

"We venture to call your attention to an error which appears on page vi of your present issue.

"We refer to the 'Bristol' performances," which states that "the first prize in the general test of the Spring Meeting of the Belgian Aero Club at Brussels was awarded to Lieut. Stampe, the pilot of the King of the Belgians, flying the King's private aeroplane—a 'Bristol' Tourer." As a matter of fact the King's private aeroplane is a 'Bristol' Fighter, not a 'Bristol' Tourer, and was supplied by this Company."

Whether "Fighters" or "Tourers," "Bristol" machines always make good, but for the sake of strict accuracy the above should be noted.

AN ADJUSTABLE HAND-VISE

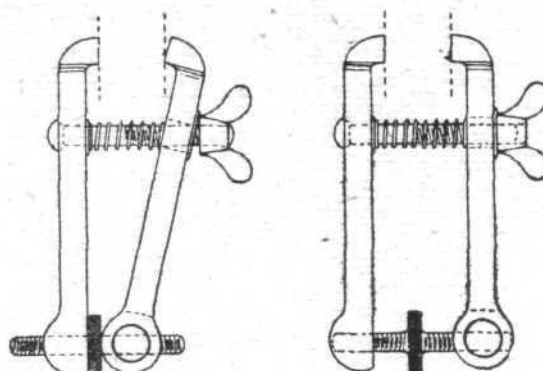
WHILE it has been made to serve its purpose for many years, the ordinary hand-vise has one very serious defect. When the jaws are open to any extent it is only possible for the bottom edges to grip the work, the position being shown clearly in the first of the accompanying sketches. While in some cases this precarious hold may be sufficient for the job, at other times it is always best to have a really effective grip on the material which is being held.

This defect is overcome effectually in the case of the Wiley's patent hand-vise, which has been introduced by Messrs. Rubery, Owen and Co., Darlaston, S. Staffs, who have been responsible for bringing out at various times a number of really ingenious and practical tools for use in connection with the aircraft and allied industries.

The Wiley vise, while being capable of use in the same way as the old-fashioned vise, has a simple adjustment enabling the edges always to be kept parallel, so that a proper grip may be obtained on the work at all times. From the second sketch it will be seen that this end is attained by the fitting of a double-ended screw, one portion being cut with a right-hand thread while the other has a left-hand thread. The latter portion is screwed into the solid end of one arm, while the other carries a bush pin on which the other arm of the vise swivels. In the centre of this double screw is a milled nut, and when this is turned the practical result is to give the vise, in effect, an adjustable centre.

If the nut is turned sufficiently, the edges can be adjusted to a parallel position with any opening. The vise can then be tightened up in the usual way, by means of the fly-nut.

As one end of the adjusting-screw works in the solid end of one arm, it prevents any play vertically of the free arm, and special care has been taken to make the whole tool as firm and as rigid as possible.



The Wiley hand-vise with adjustable jaws : On the left the jaws open, and on the right adjusted to a parallel position.

The device is a simple one, and embodies advantages so marked that the Wiley vise appears bound to prove popular, even if it does not eventually supersede the ordinary type, as would appear highly probable.

NOTICE TO AIRMEN

Aerodromes for Civil Use : Amendments

NOTICE to Airmen No. 33 of 1921 (Aerodromes for Civil Use : Consolidated List) is amended as follows :—

LIST C.—Licensed Civil Aerodromes

The following should be added :—Bembridge (Isle of Wight), Bembridge Farm ; Porthcawl ; Locks Common ; Stonehaven Dunnottar ; Lowestoft, Gunton Warren.

Coupe Deutsch

THE eliminator race for the French team to fly for the Deutsch Cup will take place on September 28 over 100 kilometers on the Cup Course : Villesauvage-La Marogue.

A French Height Record

From *l'Auto* we learn that Georges Kirsch created a new height record on June 14 last, when, on a 300 h.p. Nieuport (Hispano), he reached an altitude of 9,800 m. (32,153 ft.), thus beating the previous record, held by Casale, of 31,216 ft.

A Belgium Altitude Record

THE Commission Sportive de l'Aéro Club de Belgique have confirmed, at the session held on the 13th inst., an altitude record for Belgium, established on the 6th inst., at Haren aerodrome, by M. Lovadina, who, on a 220 h.p. Ansaldo machine, reached an altitude of 7,907 m. (25,943 ft.). They have also presented him with the silver-gilt *plaque* of l'Aéro Club de Belgique.

U.S. Air Force Bomb U-Boat

As detailed some weeks ago, the bombing attacks upon surrendered German U-boats and battleships have now been started by the United States Air Force. From New York reports to hand, dated June 22, in connection with the opening operations, it is stated that within 16 minutes three naval seaplanes, carrying a dozen 163-lb. bombs, each containing 117 lbs. of T.N.T., demolished the former German submarine U 117, 60 miles off Virginia Capes. The naval flyers flew about 75 miles from their bombing base at the Hampton Roads station, and the first salvo of only three bombs, from an altitude of 100 ft., was enough to put the target out of commission, although no direct hit was recorded.

A division of five destroyers attacking a smaller submarine with gunfire, took 24 minutes to sink her, firing 40 rounds. The manoeuvres, which are being witnessed by a large party of members of Congress, will be continued for a month, culminating in an attack by aircraft on the former German battleship *Ostfriesland* and the old American battleship *Iowa*. The latter will be steaming at full speed under wireless control.

When the experiments are completed the report should prove instructive. Although American naval officers are

The following should be deleted :—Shoreham ; Weymouth, Lodmoor.

LIST D.—Unlicensed Private Aerodromes

The following seaplane station should be added :—Southampton (Woolston). Owner : Supermarine Aviation Works, Ltd. Nearest railway stations : Woolston (L.S.W.R.), $\frac{1}{4}$ mile ; Southampton Docks (L.S.W.R.), $\frac{3}{4}$ mile, by ferry and road.

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greatly pleased with the skill and accuracy of the aerial attackers, they are very far from being at one with certain enthusiasts who claim that aircraft will result in the elimination of submarines and Dreadnoughts from the future programme of naval construction.

Without question, the present tests cannot be regarded as definite in any way having regard to the attacked being practically immobile. But at the same time, the other extreme is equally foolish, that whatever aircraft may accomplish, there is no lesson to be learnt. The country which accepts the latter view, and remains stationary, will find itself hopelessly outclassed in the next scrap in which it may be engaged.

Palestine to Mesopotamia by Air, via the Arabian Desert

A NEW air route has been opened up across the desert between Palestine and Mesopotamia, it is announced by the Air Ministry, and notification has been received of the arrival at Bagdad of three aeroplanes of the Royal Air Force, which have flown over this route. These machines formed part of a reconnaissance party that set out from Palestine on June 1, with the object of establishing a more direct line of connection between the existing aerodromes at Ramleh, in Palestine, and Bagdad, in Mesopotamia.

The length of the new route is about 590 miles, which is considerably shorter than the more northerly route formerly used. The line followed, which is an extension of the present Cairo-Ramleh route, starts from Ramleh, which is the main R.A.F. aerodrome in Palestine, passes through Amman, in Transjordan and Kasrazrak, where landing-grounds have been prepared, and proceeds thence in an almost straight line across the Arabian desert to Ramadie, on the Euphrates, and on to Bagdad. The last few intermediate ground stations for use in case of forced landings will be completed shortly. The distances between the principal stations are as follows :—

Ramleh-Amman	65 miles
Amman-Kasrazrak	55 miles
Kasrazrak-Ramadie	400 miles
Ramadie-Bagdad	60 miles

The rest of the party travelled by cars, the aeroplanes co-operating with the ground detachment in selecting the most suitable air route. The landing-grounds chosen were then marked by the party for future use.



Cause : Last week end a distinguished party of French Senators, by way of obtaining practical experience of the airway, flew over to London from Paris by one of the French air-lines, returning the same way.

And Effect : A party of members of the British Parliamentary Air Committee, it is announced, is shortly to pay a visit to Paris by air.

Is the discussion, which is to the fore in the German Reichstag in regard to aircraft problems being adversely affected through the destructive clauses of the Versailles Treaty, all camouflage? Careful watch should be kept as to developments, as one of the real bits of German luck, as was originally pointed out in *FLIGHT* soon after the Armistice, which go to her winning the Peace although she lost the War, is the carrying into effect the terms of the Peace Treaty, whereby existing German aircraft has been and is being destroyed. She is thereby relieved of having to "adapt," for economic considerations, her fighting craft to commercial requirements, and can get straight away on to new craft designed specially for the purpose which they have to serve. The immense existing bulk of our war machines which it is the authorities' endeavour to pass on for commercial use, is as great a handicap to British progress in commercial aircraft as the Germans could themselves have devised. So again we wonder whether the case put forward by the Germans against destroying or confiscating their existing war material of the air is just throwing dust in the Britisher's eyes. Presently, when the new German commercial machines get going, we shall see.

APPRECIATION of flying possibilities is spreading. Last Friday morning, following a 'phone message from Messrs. Thomas Cook and Sons, a London business man, who had to be back in town by 7 p.m., boarded a 'bus of the Handley Page Co., at Croydon, flew to Liverpool for an important appointment—time 2 h. 15 m., and later returned to London—time 2 hours. A car put the finish to the journey from Croydon, and the passenger was at his appointment at 7.7 p.m.

HERE'S another. Mr. George S. Baird arrived from the United States on June 21, intending to stay in this country

until August. On Saturday morning last, however, at eleven o'clock he received a wire from New York, recalling him immediately. Acting at once, Mr. Baird went to the steamship offices, only to find that the Cunarder "Aquitania" had left her moorings at Southampton. Realising that the boat called at Cherbourg, Mr. Baird hired a taxiplane from the Lep Aerial Travel Bureau to fly to that port. By 1.30 p.m. the passenger was on the way in a De H. 9 machine piloted by Mr. Alan Cobham. A landing was made at St. Ingelvert to comply with French Customs formalities, but Cherbourg was reached in good time to catch the liner, and Mr. Baird is now well out in the Atlantic.

ALTHOUGH it was the first time she had ever gone up with him, she felt perfectly secure, completely at ease. His control was so assured, his hand so steady, his whole bearing so nonchalantly matter of fact, that it was impossible to entertain a thought of fear.

At first, to be sure, the sensation of leaving the ground had shaken her nerves, made her a trifle squeamish, but this feeling had soon passed, and now, as they rose higher and higher, she revelled in enjoyment of the swift volitation. How exhilarating it was, the light, buoyant motion, the rush of air past her temples—ah, delicious!

Up, up they flew. Far down there below people were still running about, intent on their own petty gains, buying, selling, wrangling. But up here all was peaceful, calm, detached—just they two alone, together.

Ah, if it could last forever—this swift upward flight with its splendid exhilaration—. But what was this? He was jerking at a lever, their speed was slackening. Suddenly, with a sickening lurch, their progress was arrested.

Breathless she saw him turning, heard him shout:

"Top floor! Ladies' wear."—*Exchange.*

BOMB-DROPPING in Court does not sound a very cooling pastime during the present heat-wave. Members of the Inventions Commission the other day were indulged in an exhibition in this sport with a fourteen dropper for the purpose of substantiating the claim of Mr. Gledhill for his invention of this ingenious gear. One can well imagine a nervous commissioner when the dummy operations started suddenly remembering an urgent appointment elsewhere. It is always the unloaded gun that gets in its deadly work.



Lord Leverhulme
Uses London-
Paris Air Route:
Our picture
shows Lord
Leverhulme de-
scending from
the Instone
D.H.18 (Napier
"Lion"), which is
doing such good
service on the
London-Paris
Air route. Lord
Leverhulme con-
stantly travels to
and from the
Continent by air.

Personal

Killed

Flying Officer HENRY MARINUS STRUBEN, eldest son of Major and Mrs. Arthur Struben, "Bronwydd," Beaconsfield, Bucks., was killed while flying on duty on June 24 at Hawkinge, near Folkestone. He was aged 22 years.

Married

Lieut. A. CYRIL BAYLEY, R.A.F., only son of Mr. and Mrs. A. Bayley, was married on June 18, at All Saints' Church, Cairo, Egypt, to MARY EVELYN, youngest daughter of Mr. and Mrs. TANKERVILLE-CHAMBERLAYNE, of Cranbury Park, Hants.

Flight-Lieut. DAVID DROVER, R.A.F., was married on June 15, at St. Columba's, Belgravia, to OLGA CONWAY MICHAELSEN.

Flying Officer J. S. HARRISON, R.A.F., second son of Mrs. Harrison, of Bournemouth, was married on June 21, at Weybridge to OLGA JOYCE SALTER, elder daughter of Mr. and Mrs. Ernest Salter, of Barclays Bank House, Weybridge.

Capt. GERALD HEWITT MAJOR, R.A.F., eldest surviving son of Charles Major, J.P., and the late Mrs. Major, of Wembdon, Bridgwater, Somerset, was married on June 22, at St. Peter's Church, Oadby, Leicestershire, to PHYLLIS

MARY, younger daughter of WILLIAM HENRY WINTERTON, J.P., and Mrs. WINTERTON, of The Knoll, Oadby.

To be Married

The marriage of Lieut.-Col. ROBERT LORAIN, D.S.O., M.C., the actor and airman, and WINIFRED LYDIA STRANGMAN, elder daughter of Sir Thomas Strangman, Advocate-General of Bombay, will take place at St. George's, Hanover Square, on July 14, at 2.30 p.m. Col. Loraine recently returned to England from a tour in the East.

Items

Colonel THE MASTER OF SEMPILL desires us to state that he left this country for Japan on June 11, 1921, and will be away some time in connection with work for the Imperial Japanese Naval Air Service. All letters should be addressed: Colonel The Master of Sempill, c/o Naval Department, Tokyo, Japan. Cables should be sent in Bentley's code: Sempill, "Kaigunsho," Tokyo. Any essential personal business will be attended to by Commander Smart, C.M.G. (late R.N.), c/o Messrs. Jansen, Cobb, Pearson and Co., 22, College Hill, London, E.C. 4, who has full power to act in all matters.

The will of the late Major JOHN FOWLER, of Cheapside, E.C., R.A.F., has been proved at £4,954.

DEATH OF FLIGHT-LIEUTENANT BEAUCHAMP-PROCTOR

It is with very great regret that we have to record the death, at the age of 24, of Flight-Lieut. Andrew W. Beauchamp-Proctor, V.C., D.S.O., M.C. and bar, D.F.C., which took place on June 21 as the result of a flying accident at Upavon Flying School. During a practice flight his machine fell to the ground out of control as the result of an upside-down spin after looping.

At the inquest a verdict of "Accidental Death" was recorded.

Lieut. Beauchamp-Proctor was a South African, born at George, near Cape Town. He was the son of Mr. J. J. Beauchamp-Proctor, of the Civil Service Club, Capetown, and was educated at Capetown University, where he studied engineering, and obtained the degree of B.Sc. At twenty-one he joined the Royal Flying Corps, and qualified for a graduation certificate. He was awarded the V.C. on November 30, 1918, the official announcement stating that between August 8, 1918, and October 8, 1918, this officer proved himself victor in 26 decisive combats, destroying 12 kite balloons, 10 aircraft, and driving down 4 other aircraft completely out of control.

Between October 1, 1918, and October 5, 1918, he destroyed 2 enemy scouts, burned 3 kite balloons, and drove down 1 scout completely out of control.

On October 1, 1918, in a general engagement with 28 machines, he crashed two Fokker biplanes; on October 2 he burned a hostile balloon; on October 3 he drove down, completely out of control, an enemy scout and burned a balloon; and on October 5 a third balloon.

On October 8, while flying home at a low altitude, after destroying an enemy two-seater, he was painfully wounded in the arm by machine-gun fire, but, continuing, landed safely, and made his report before being admitted to hospital.

In all he proved himself conqueror over 54 foes, destroying 22 machines, 16 kite balloons, and driving down 16 aircraft out of control.

Capt. Beauchamp-Proctor was awarded the M.C. on June 22, D.F. Cross on July 2, Bar to M.C. on September 16, and the D.S.O. on November 2—all in 1918.

The funeral took place on Friday, June 24, at Upavon, with full Air Force honours. The first part of the Service was held in the Parish Church at Upavon, and was conducted by the Vicar, the Rev. G. Tonge. From there the coffin, draped with the R.A.F. Ensign, was conveyed on an aeroplane trailer to the cemetery near by, accompanied by the escort and firing party and led by the Central Flying School Band, playing the "Dead March" in *Saul*.

Behind the coffin were carried the late officer's decorations, and then followed the chief mourners and representatives of the Dominion of South Africa, Air Ministry, Inland Area, and No. 7 Group, R.A.F. and the officers and airmen of the Central Flying School, and other neighbouring Air Force units. The coffin was borne by six N.C.Os., and six of the deceased's brother officers acted as pall bearers. On arrival at the cemetery a most impressive spectacle was presented by the escort and firing party forming a square round the grave, with the mourners and officers in the centre. The service was concluded with the firing of volleys over the grave, followed by the "Last Post" sounded by the trumpeters.

The floral tributes were both numerous and beautiful, and among them were those sent by Major Weil, Gen. Smuts, and the members of the South African Government now in London, and by the Overseas Club of Mafeking.

IN PARLIAMENT

Airships (Disposal)

LIEUT.-COMMANDER KENWORTHY, on June 21, asked the Secretary of State for Air whether the date for the disposal of the rigid airships has been postponed; what additional expenditure this will entail; and what is the reason for this alteration of policy?

Capt. Guest: No, sir, the date August 1 still stands.

Lieut.-Commander Kenworthy: Was it not decided last year that these airships should be disposed of before this? When was the decision taken to wait till August?

Mr. Speaker: That does not arise here.

Sir W. Davison: Will the right hon. gentleman say when the surplus gasbags in the House of Commons will be disposed of?

Airships (Standardised Fittings)

SIR IVOR PHILLIPS on June 27 asked the Secretary of State for Air whether any international arrangements have been made or are under consideration for the adoption of an international standard head and fittings for airships and airship moorings masts, so that airships of all nations may make use in emergency of any mooring masts that may hereafter be erected in any part of the world.

Capt. Guest: The desirability of standardising such fittings is fully appreciated, and steps are being taken to consult other nations on this point.

Captain A. Marchal Passes Away

A FAMOUS War flight is recalled in the death, announced from Paris, of Capt. Anselme Marchal, as the result of a motoring accident. It was Marchal who, it will be remembered, flew over Berlin in June, 1916, and dropped, not bombs, but pamphlets over the German capital. He attempted on that occasion to continue his long flight from Nancy across Germany to the Russian lines, but was obliged to land in Germany and was taken prisoner. Subsequently he escaped with the airman Garros.

An Italian "In Memoriam"

By way of commemorating the death of Capt. Baracca, the great Italian Ace, his brother pilots organised last week a 1,000-kilometre flight, starting from Ravenna and returning thereto via Bellio, Trento, Nirvesa, Gorizia, Trieste, Fiume and Pola. The weather proved very tempestuous, and four participants completed the circuit, Lieut. Brack Papa, (B.R. Fiat) taking 6 hrs. 48 mins. 27 secs., and Lieut. Guglielmetti, 9 hrs. 28 mins. 38 secs.

THE ROYAL AIR FORCE

Permanent Commissions

Flying Officer B. Ankers, D.C.M., is granted a permanent commn., retaining his present substantive rank and seny.; Aug. 1, 1919.

Stores Branch

Pilot-Officer W. A. G. Goldsworthy is granted a permanent commn. as Flying Officer, with effect from and with seny. of Sept. 12, 1919, and is transfd. to the Stores Branch, with effect from June 17, 1920 (the notification in *Gazette* of Sept. 12, 1919, appointing him to a short service commn. is cancelled).

Flying Officer E. W. Crosbie is granted a permanent commn., retaining his present substantive rank and seny.; June 17, 1920.

Short Service Commissions

The following are granted short service commns. as Flying Officers with effect from, and with seny. of the dates indicated:—G. L. Molloy-O'Neill; June 8. A. H. Padley; June 6.

Flying Branch

Sec.-Lieut. J. Cockburn (unemployed list) relinquishes his temp. commn. on joining the T.F.

Administrative Branch

Lieut. E. F. Jones (unemployed list) relinquishes his temp. commn. on appt. to the T.F. Lieut. (Hon. Capt.) A. Herbert (unemployed list) relinquishes his temp. commn., and is permitted to retain the rank of Capt. Lieut. A. J. Edgar relinquishes his temp. commn. on ceasing to be employed, and is permitted to retain his rank; March 16, 1919. Lieut. E. G. Boone is transfd. to the unemployment list; May 31.

London Gazette, June 17

Permanent Commissions

Sqdn.-Ldr. E. V. S. Wilberforce, A.F.C., is placed on half-pay, Scale B, for five months from April 13.

Medical Branch

Sqdn.-Ldr. H. B. Porteous, M.B., is secd. for duty with S. Afr. Air Force; June 3.

Flying Branch

Sec.-Lieut. H. R. Garnham (unemployed list) relinquishes his temp. commn. on appt. to T.F. Capt. S. H. Starey (unemployed list) relinquishes his temp. commn. on re-appt. to Spec. Res. Army; Jan. 15, 1919. Lieut. M. J. Thurston (unemployed list) relinquishes his temp. commn. on joining T.F. Lieut. H. W. McCarthy relinquishes his temp. commn. on account of ill-health contracted on active service, and is permitted to retain his rank; June 17.

Memorandum

Gazette, July 15, 1919, relating to 9385 Cdt. W. Borthfield is cancelled.



Service Functions

THE Editor will be glad to receive notice and particulars of all Service functions (dinners, etc.), which will be published in *FLIGHT* without charge.

An Allowance and Dress Uniform

THE Air Ministry has announced that an outfit allowance of £25 is sanctioned for each Army officer who was seconded to the R.A.F. on or after September 1, 1920. In view of this, officers of the Army seconded for service with the R.A.F. will be required to provide themselves with R.A.F. service dress uniform.

R.A.F. Cadets' Outfits

CLAIMS under Air Ministry Weekly Order 409 of 1919 in respect of expenses incurred by Flight Cadets and Cadets of the Royal Air Force during the War for the purchase of uniform and other approved articles cannot be considered if received in the Air Ministry after July 31, 1921.

R.A.F. Men and the Navy

A NEW Admiralty Fleet Order states that ex-members of the Royal Air Force who may be permitted to enter the Royal Navy or Royal Marines may, at the discretion of the Admiralty, be allowed to count their previous service in the Royal Air Force towards their naval or marine pension and towards the acquisition of good conduct badges, under the conditions governing the reckoning of previous Army service.

Training of Boy Mechanics, R.A.F.

As the result of examinations for the entry of Boy Mechanics into the Royal Air Force held in the first six months of 1921, approximately 500 boys will, the Air Ministry announces, be taken into the Force. The successful candidates will be allocated for training in various skilled trades in approximately the following proportions:—Carpenters, 150; coppersmiths, 30; draughtsmen, 10; fitters, 300; pattern makers, 10.

Boys accepted for service will be taken both from among those who have been nominated by the Local Education Authorities and who will be examined on the 5th July and those who sat in May for the open competitive examination held by the Civil Service Commissioners. In assigning boys to the various trades, every endeavour is made to give effect to each boy's individual preference. The wishes of

Erratum

Gazette, April 26.—Add following to notifications concerning Flying Officers:—A. H. Allan and R. F. Wilson. These officers are transfd. to Stores Branch, with effect from June 17, 1920.

London Gazette, June 21

Short Service Commissions

The following are granted short service commns. as Flying Officers, with effect from and with seny. of June 14:—J. H. H. Brunt, J. F. Dewar.

Flying Officer C. E. Amore resigns his short service commn., and is granted the rank of Capt., Oct. 30, 1920 (substituted for *Gazette*, Oct. 29, 1920).

Seconding and Re-Seconding

The following are granted temp. commns. as Flying Officers on seconding for four years' duty with the R.A.F.:—Lieut. B. Aucott, R.G.A., Lieut. F. St. D. B. Lejeune, R.G.A.; April 26.

Lieut. H. E. Power, E. Surrey Regt., is granted a temp. commn. as a Flying Officer on re-seconding for four years' duty with the R.A.F., retaining his original seny. in that rank; June 9.

Flying Branch

Sec. Lieut. F. B. Stark is transfd. to the unempld. list; June 23. Lieut. A. A. Barnes is placed on the retired list; June 22.

Administrative Branch

Lieut. W. J. Washer relinquishes his temp. commn. on account of ill-health, and is permitted to retain his rank; Aug. 7, 1919 (substituted for *Gazette*, Sept. 30, 1919).

Technical Branch

The following relinquish their temp. commns. on appt. to the T.F.:—Lieut. J. H. Dickson (unempld. list); Lieut. (Hon. Capt.) R. Godfrey (unempld. list). Lieut. F. J. Pope is placed on the retired list on acct. of ill-health, and is granted the rank of Capt.; June 22. Lieut. R. West is placed on the retired list; June 22. Sqdn.-Ldr. D. A. B. Morle relinquishes his temp. commn. on ceasing to be empld.; May 1.

Medical Branch

Flight-Lieut. V. A. T. Spong relinquishes his temp. commn. on ceasing to be empld., and is permitted to retain his rank of Capt.; June 1.

Memoranda

The following are granted temp. commns., in ranks stated, for duty in Electrical Services Works Co. under Directorate of Works and Buildings:—

Flying Officers.—G. E. Blake, E. G. Taylor; Feb. 21.

Pilot Officers.—R. S. Broderick (Lieut., R.A.F., retired), W. J. Root; Feb. 21. H. H. Fell; April 1.

One Cadet is granted an hon. commn. as Sec. Lieut. with effect from date of his demobilisation.

the boys in this respect will be considered in the order of their position on the examination results list.

Full particulars as to entry are given in the "Regulations in regard to the entry and training of Boy Mechanics, Royal Air Force" (Air Publication 134), which is obtainable on application to the Secretary (A.E.), Air Ministry, Kingsway, W.C. 2, from any Royal Air Force Recruiting Depot, and from any of the Local Education Authorities in the country.

Safety and Economy on London-Paris Air Service, R.Ae.S. Committee Report

WITH reference to the italicised words in brackets after the names of the members of the above Committee appearing in the Report published in *FLIGHT* for June 16, the Royal Aeronautical Society desire us to point out that these relate to the special point of view which each individual was asked to represent on the Committee, and do not indicate his profession or that of any firm.

An O.B.E. Cancelled

THE *London Gazette*, of June 24, contained the following announcement: "The King has directed that the appointment of Mr. Cecil John L'Estrange Malone, M.P., formerly Lieutenant-Colonel, Royal Air Force, and Lieutenant, Royal Navy, to be an officer of the Military Division of the Most Excellent Order of the British Empire, dated Jan. 1, 1919, shall be cancelled and annulled, and his name erased from the Register of the Order."

Mr. Malone, who was returned for East Leyton in 1918, entered the Royal Navy in 1905. During the War he served with distinction, and was mentioned in despatches. In the Christmas Day, 1914, raid on Cuxhaven, he commanded the R.N.A.S. units. In consequence of a speech delivered at the Albert Hall on November 7 last, he was on November 20 last, sentenced at Bow Street Police Court to six months' imprisonment in the second division under Reg. 42 of the Defence of the Realm Act for having committed an act likely to cause sedition and disaffection among the civil population. The speech was made at a meeting organised by the "Hands off Russia" Committee and Communist Party of Great Britain. Mr. Malone was arrested in Dublin when about to address the members of the Medical Society of Trinity College on Bolshevism. Mr. Malone was married shortly after his release.

R.A.F. CHAMPIONSHIPS

THE annual championships of the Royal Air Force Athletic Association took place at the Inland Area Aircraft Depot, Henlow, on June 24 and 25. The results of the first day were:

100 Yards.—Sergt.-Maj. F. Mawby, Cranwell (holder), 1; L.A.C. Sargent, 11 Irish Wing, 2; F.-O. Bayes, Uxbridge, 3. Won by two yards. Time, 10 2-5 sec.

880 Yards.—Corpl. Taylor, Halton, 1; O.C. Smith, Henlow, 2; Sergt. Pimm, Halton, 3. Won by 25 yards. Time, 2 min. 6 4-5 sec.

120 Yards Hurdles.—F.-O. Trundle, Halton, 1; F.-O. Luard, Uxbridge, 2; Flight-Lieut. Bryson, No. 10 Group, 3. Won by 4 yards. Time, 17 3-5 sec.

220 Yards.—Sergt.-Maj. F. Mawby, Cranwell (holder), 1; F.-O. Bayes, Uxbridge, 2; A.C. Trapp, Henlow, 3. Won easily. Time, 23 sec.

440 Yards.—Sergt. Rulley, Halton, 1; A. C. Cassin, Cranwell, 2; F.O. Cording, Shrewsbury, 3. Won by eight yards. Time, 54 3-5 sec.

One Mile.—A.C. Laing, Halton, 1; F.O. Pyper, Uxbridge, 2; Corpl. Palm, Halton, 3. Won by half a yard. Time, 4 min. 49 2-5 sec.

The Team Championship, held in conjunction, resulted as follows: Halton, 8 points, 1; Uxbridge, 19, 2; Cranwell, 35, 3; No. 10 Group, 43, 4; Henlow, 46, 5; 11 Irish Wing, 58, 6.

High Jump.—The following qualified for the final by clearing 5 ft. 3 in.: Flight-Lieut. Compston, Uxbridge; S.M. Miller (holder), Cranwell; A.C. Stack, Cranwell; F.-Cadet Nuttall, Cranwell; A.C. McQueen, 11 Irish Wing; and F.O. Rogerson, 11 Irish Wing.

Long Jump.—A.C. Slack, Cranwell, 21 ft. 1 1/2 in.; S.M. Miller (holder), Cranwell, 20 ft. 6 1/2 ins.; and A.C. Amos, Henlow, 20 ft. 1 in., compete in final.

Putting the Shot.—Corpl. Blythe, Uxbridge; Flight-Lieut. Burge, Cranwell; and Flight-Lieut. Maxwell, No. 1 Group, all putt 31 ft. 9 ins., and compete in final.

On the second day the programme consisted for the most part of team contests for the King's Cup. Competition throughout the day was exceptionally keen, and as a result it was by only two points that Cranwell beat Uxbridge and became the holders of the trophy. Results:—

Two Miles Relay Race.—Halton, 1; R.A.F. Depot, Uxbridge, 2; Henlow, 3; No. 10 Group, 4; 11 Irish Wing, 5; Cranwell, 6. Won by thirty yards. Time, 8 mins. 39 2-5 sec. Winning team: Corpl. Taylor, Sergt. Pimm, Corpl. Palm, and C. Laing.

440 Yards Relay.—J. Cranwell, 1; No. 10 Group, 2; Uxbridge, 3; Halton, 4; Henlow, 5; No. 3 Group, 6. Winning team: Mawby, Hayter, Malin, Cassin. Won by five yards. Time, 47 2-5 secs.

Three Miles Team and Individual Championship.—Halton, 19 points, 1; Cranwell, 22, 2; Uxbridge, 31, 3; No. 10 Group, 37, 4. The first six home were L.A.C. Morgan, 11 Irish Wing, 1; Lc.-Corpl. Jarrott, Halton, 2; Corpl. Harley, Uxbridge, 3; A.C. McKenzie, No. 10 Group, 4; F.-Cadet Hawtrey, Cranwell, 5; A.C. Fennell, Shrewsbury, 6. Won by a dozen yards. Time, 16 mins. 20 2-5 sec.

High Jump.—F.-Cadet Nuttall, Cranwell, 5 ft. 10 1/2 in., 1; S.M. Miller, Cranwell (holder), 5 ft. 8 in., 2; A.C. Slack, Cranwell, 3; A.C. McQueen, 11 Irish Wing, 4. The previous best was 5 ft. 8 3/4 in. by Sergt.-Maj. Miller.

880 Yards Relay.—Cranwell, 1; Uxbridge, 2; Henlow, 3. Winning team: Mawby, Hayter, Malin, Cassin. Won by about 12 yards. Time, 1 min. 37 sec.

Putting the Shot.—Flight-Lieut. Maxwell, No. 1 Group, 34 ft. 1 in., 1; F.-Sergt. Newby, Cranwell, 32 ft. 3 in., 2; Sergt.-Maj. Mawby, 31 ft. 9 in., and Corpl. Blythe, Uxbridge, 31 ft. 9 in., 3. Maxwell beat the R.A.F. record held by himself by 3 in.

440 Yards Boys' Relay.—Cranwell beat Halton easily in 53 secs.

360 Yards Hurdles (three 120 yds.).—No. 10 Group, 1; Halton, 2; Uxbridge, 3. Won by ten yards. Time, 55 2-5 sec. Winning team: F.-O. Gairdner, Flight-Lieut. Bayson, A.-C. Fennell.

One Mile Relay (four 440 yds.).—Uxbridge, 1; Cranwell, 2; Halton, 3. Won by two yards. Time, 3 min. 44 2-5 sec. Winning team: F.-O. Fenwick, A.-C. Hodgson, Corpl. Blythe, A.-C. Thorne.

Tug-of-War.—Gosport beat Henlow two pulls to nil.

The competition for the King's Cup resulted as follows: Cranwell, 48 points, 1; Uxbridge, 46, 2; No. 10 Group, 41, 3; Halton, 40, 4; Henlow, 26, 5; No. 3 Group, 13, 6; 2nd Irish Wing, 11, 7; Shrewsbury, 1, 8.

PUBLICATIONS RECEIVED

"De Jaarbeurs" Official Organ of Holland's Fifth Industries Fair. Federation of British Industries, 39, St. James's Street, S.W. 1.

Report of the Scottish Education Department for the Year 1920-21, by the Director on the Royal Scottish Museum, Edinburgh. London: H.M. Stationery Office. Price 6d. net.

National Physical Laboratory Report for the Year 1920. London: H.M. Stationery Office. Price 5s. net.

Report on Experimental Aerial Survey at Ottawa, 1920. Bulletin No. 2. The Canadian Air Board, Ottawa, Canada.

Rendiconti dell'Istituto Sperimentale Aeronautico. Vol. IX, No. 2. May 1921. Libreria di Scienze e Lettere, Piazza Madama, 19-20, Rome. Price l. 17.

Technical Note No. 49. On the Resistance of the Air at High Speeds and on the Automatic Rotation of Projectiles. By D. Riabouchinski. National Advisory Committee for Aeronautics, Navy Building, Washington, D.C., U.S.A.

Technical Note No. 51. Airplane Balance. By L. Huguet. National Advisory Committee for Aeronautics, Navy Building, Washington, D.C., U.S.A.

AERONAUTICAL PATENT SPECIFICATIONS

Abbreviations: cyl. = cylinder; I.C. = internal combustion; m. = motors. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.

APPLIED FOR IN 1920

Published June 30, 1921

- 3,344. R. ESNAULT-PELTERIE. Hydraulic power-transmission system. (138,629.)
- 6,399. H. SCOTT-PAINE AND SUPERMARINE AVIATION WORKS, LTD. Boat-hooks. (164,130.)
- 7,108. R. C. SHORTT. Metal outer cover for rigid airships, aeroplane coverings, etc. (164,153.)
- 7,159. CURTISS AEROPLANE AND MOTOR CORPORATION. Aeroplane controlling devices. (140,080.)
- 7,715. R. WAGNER. Steam-generator for aircraft, etc. (140,425.)
- 8,370. W. PEAKE. Adjustment of clinometers. (164,177.)
- 8,958. E. R. CATHROP. Parachutes. (164,190.)
- 9,135. R. WAGNER. Air-supply to boiler furnaces of steam-driven aircraft. (141,685.)
- 10,267. BLACKBURN AEROPLANE AND MOTOR CO., LTD., and A. C. THORNTON. Torpedo-adjusting mechanism for aircraft. (164,201.)
- 10,312. R. WAGNER. Steam-driven aircraft. (141,715.)
- 15,289. DAIMLER MOTOREN GES. Controlling and stabilising means for aircraft. (144,324.)
- 18,349. DAIMLER MOTOREN GES. Aeroplane construction and propulsion. (146,375.)
- 19,635. L. J. WING MANUFACTURING CO. Air propellers. (147,662.)
- 20,114. Soc. ANON. L. BREGUET. Apparatus for riveting and making metal tubes, etc. (148,196.)
- 20,492. AGO FLUGZEUGWERKE. Aeroplanes. (148,521.)
- 25,156. A. BOERNER. Adjustable propeller. (164,271.)
- 33,968. SPERRY GYROSCOPE CO. Gyroscopes. (164,285.)

If you require anything pertaining to aviation, study "FLIGHT's" Buyers' Guide and Trade Directory, which appears in our advertisement pages each week (see pages xiii and xiv).

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The Aircraft Engineer and Airships

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